

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method comprising:

receiving, at a policy server, information associated with a first signaling message and a second signaling message, [[where]] the first signaling message and the second signaling message [[are]] being associated with a calling party and a called party, [[where]] an ingress switch in an Asynchronous Transfer Mode (ATM) network [[is]] being associated with the calling party, and an egress switch in the ATM network [[is]] being associated with the called party;

identifying, by the policy server and based on the first signaling message and the second signaling message, a policy associated with the calling party;

determining, by the policy server, whether the policy is satisfied with respect to the first signaling message and the second signaling message, [[where]] the determining of whether the policy is satisfied comprising comprises:

identifying, based on the policy, a network port, in the ATM network, that the calling party is authorized to use, [[where]] the network port [[is]] being associated with a maximum burst size limit,

determining a virtual path between the ingress switch and the egress switch, [[where]] the virtual path includes including the network port in the ATM network,

identifying an available forward bandwidth from the ingress switch to the egress switch along the virtual path, the available forward bandwidth being based on modifying an actual forward bandwidth, for the virtual path, by a forward overbooking factor associated with the virtual path,

identifying an available reverse bandwidth from the egress switch to the ingress switch along the virtual path, the available reverse bandwidth being based on modifying an actual reverse bandwidth, for the virtual path, by a reverse overbooking factor associated with the virtual path,

calculating a first requested bandwidth associated with the first signaling message, [[where]] the first requested bandwidth includes including a first forward requested bandwidth from the ingress switch to the egress switch along the virtual path and a first reverse requested bandwidth from the egress switch to the ingress switch along the virtual path,

calculating a first burst size associated with the first signaling message and a second burst size associated with the second signaling message,

determining that the policy is satisfied for the first signaling message ~~in response to~~ based on determining that:

the available forward bandwidth exceeds the first forward requested bandwidth,

the available reverse bandwidth exceeds the first reverse requested bandwidth, and

the first burst size does not exceed the maximum burst size limit,

calculating a second requested bandwidth associated with the second signaling message, [[where]] the second requested bandwidth ~~includes~~ including a second forward requested bandwidth from the ingress switch to the egress switch along the virtual path and a second reverse requested bandwidth from the egress switch to the ingress switch along the virtual path, and

determining that the policy is not satisfied for the second signaling message ~~in response to~~ based on determining an occurrence of at least one of:

a total forward requested bandwidth, including the first forward requested bandwidth and the second forward requested bandwidth, exceeds the available forward bandwidth,

a total reverse requested bandwidth, including the first reverse requested bandwidth and the second reverse requested bandwidth, exceeds the available reverse bandwidth, or

a total burst size, including the first burst size and the second burst size, exceeds the maximum burst size limit, [[and]]

forwarding, from the policy server ~~and~~ to the ingress switch, a connection failure notice related to the second signaling message ~~in response to~~ based on determining that the policy is not satisfied for the second signaling message; and

causing, by the policy server and ~~in response to~~ based on determining that the policy is satisfied for the first signaling message, a communication, related to the first signaling message, to be established between the ingress switch and the egress switch using the virtual path.

2. (Previously Presented) The method as set forth in claim 1, where at least one of the first signaling message or the second signaling message comprises a Connect message.

3. (Previously Presented) The method as set forth in claim 1, where at least one of the first signaling message or the second signaling message comprises an Add Party message.

4. (Previously Presented) The method as set forth in claim 1, where at least one of the first signaling message or the second signaling message comprises a Release message.

5. (Previously Presented) The method as set forth in claim 1, where at least one of the first signaling message or the second signaling message comprises a Setup message.

6. (Currently amended) The method as set forth in claim 1,
where determining that the policy is satisfied for the first signaling message is further in
~~response to-based on~~ determining that an address, associated with the calling party, is within a range of authorized addresses.

7. (Currently amended) The method as set forth in claim 1, where the network port is associated with a maximum call attempt rate limit, and
where determining that the policy is satisfied for the first signaling message is further in
~~response to-based on~~ determining that establishing the communication associated with the first signaling message does not result in exceeding a the maximum call frequency rate for the network port.

8. (Currently amended) The method as set forth in claim 1, where determining that the policy is satisfied for the first signaling message is further ~~in response to~~ based on determining that an address, associated with the called party, is within a list of address ranges to which the calling party is authorized to call.

9. (Currently amended) The method as set forth in claim 1, where the method further comprises:

identifying a policy for the called party; and
determining whether the policy for the called party is satisfied with respect to the first signaling message, where determining whether the policy for the called is satisfied includes:
determining whether an address associated with the calling party is within a list of address ranges from which the called party is allowed to receive calls, and
where causing the communications to be established ~~in response to~~ based on determining that the address associated with the calling party is within a list of address ranges from which the called party is allowed to receive calls.

10-11. (Canceled)

12. (Currently amended) The method [[in]] as set forth in claim 1, where determining that the policy is satisfied for the first signaling message is further ~~in response to~~ based on determining that a requested class of service, associated with the first signaling message, is permitted for the network port.

13. (Currently amended) The method as set forth in claim 1,
where determining that the policy is satisfied for the first signaling message is further ~~in response to~~ based on determining that establishing the communication associated with the first signaling message does not result in a quantity of concurrent communications that exceed a particular maximum number of concurrent calls.

14. (Currently Amended) A policy server comprising:
a memory to store entries that relate subscribers to policies associated with a plurality of policy features,
[[where]] the policy server [[is]] being included in an Asynchronous Transfer Mode (ATM) network to establish communications between a calling party and a called party, the ATM network comprising:
an ATM switch serving a customer premises equipment (CPE) operated by the calling party, and
a signaling intercept processor associated with the ATM switch, the signaling intercept processor to intercept a first signaling message and a second signaling message related to the calling party and the called party, and
a processor to:
receive, from the signaling intercept processor, information associated with the first signaling message and the second signaling message,
determine a policy, of the policies in the memory, for the calling party,

identify one or more policy features associated with the policy for the calling party, and

determine whether at least one policy condition, associated with the one or more policy features for the calling party, is satisfied with respect to the first signaling message and the second signaling message, [[where]] a first connection path [[is]] being established when the at least one policy condition is satisfied with respect to the first signaling message, [[where]] a second connection path [[is]] being established when the at least one policy condition is satisfied with respect to the second signaling message, [[where]] the first connection path and the second connection path include including a particular network port authorized for use by the calling party, the particular network port being associated with a maximum burst size limit, and

[[where]] the processor, when determining whether the at least one policy condition is satisfied, the processor is being further to:

identify an available forward bandwidth between the calling party and the called party via the particular network port, the available forward bandwidth being based on modifying an actual forward bandwidth, between the calling party and the called party via the particular network port, by a forward overbooking factor,

identify an available reverse bandwidth between the called party and the calling party via the particular network port, the available reverse bandwidth being based on modifying an actual reverse bandwidth, between the calling party and the called party via the particular network port, by a reverse overbooking factor that differs from the forward overbooking factor,

determine a first burst size associated with the first signaling message and a second burst size associated with the second signaling message,

calculate a first requested bandwidth associated with the first signaling message,
[[where]] the first requested bandwidth includes including a first forward requested
bandwidth between the calling party and the called party and a first reverse requested
bandwidth between the called party and the calling party,

determine that the at least one policy condition is satisfied for the first signaling
message in-response-to-based-on determining that the available forward bandwidth
exceeds the first forward requested bandwidth, the available reverse bandwidth exceeds
the first reverse requested bandwidth, and the first burst size does not exceed the
maximum burst size limit,

calculate a second requested bandwidth associated with the second signaling
message, [[where]] the second requested bandwidth includes including a second forward
requested bandwidth between the calling party and the called party and a second reverse
requested bandwidth between the called party and the calling party, and

determine that the at least one policy condition is not satisfied for the second
signaling message in-response-to-based-on determining an occurrence of at least one of:

a total forward requested bandwidth, including the first forward requested
bandwidth and the second forward requested bandwidth, exceeds the available
forward bandwidth,

a total reverse requested bandwidth, including the first reverse requested
bandwidth and the second reverse requested bandwidth, exceeds the available
reverse bandwidth, or

a total burst size, including the first burst size and the second burst size,
exceeds the maximum burst size limit.

15. (Previously Presented) The policy server as set forth in claim 14, where at least one of the first signaling message or the second signaling message comprises a Connect message.

16. (Previously Presented) The policy server as set forth in claim 14, where at least one of the first signaling message or the second signaling message comprises an Add Party message.

17. (Previously Presented) The policy server as set forth in claim 14, where at least one of the first signaling message or the second signaling message comprises a Release message.

18. (Previously Presented) The policy server as set forth in claim 14, where at least one of the first signaling message or the second signaling message comprises a Setup message.

19. (Previously Presented) The policy server as set forth in claim 14, where, when determining whether the at least one policy condition is satisfied, the processor is further to:
determine that the at least one policy condition is satisfied for the first signaling message when a network address, associated with the calling party, is within a particular range of authorized addresses.

20. (Previously Presented) The policy server as set forth in claim 14, where the particular network port is a customer logical port.

21. (Previously Presented) The policy server as set forth in claim 14, where the particular network port is a full physical port.

22. (Currently amended) The policy server as set forth in claim 14, where, when determining whether the at least one policy condition is satisfied, the processor is further to:
determine that the at least one policy condition is satisfied for the first signaling message when establishing the first connection path does not result in exceeding a maximum call frequency rate for the particular network port.

23. (Previously Presented) The policy server as set forth in claim 14, where, when determining whether the at least one policy condition is satisfied, the processor is further to:
determine that the at least one policy condition is satisfied for the first signaling message when an address, associated with the called party, is within a plurality of addresses that the calling party is authorized to contact.

24. (Previously Presented) The policy server as set forth in claim 23, where the processor is further to:

identify a group of subscribers that the calling party is authorized to contact, and
identify, based on the group of subscribers, the plurality of addresses.

25. (Currently amended) The policy server as set forth in claim 14, where the processor is further to:

determine that the at least one policy condition is satisfied for the first signaling message when an address, associated with the calling party, is within a plurality of addresses with which the called party is authorized to contact.

26. (Previously Presented) The policy server as set forth in claim 25, where the processor is further to:

identify a group of subscribers that the called party is authorized to contact, and identify, based on the group of subscribers, the plurality of addresses.

27-30. (Canceled)

31. (Currently Amended) The policy server as set forth in claim 14, where the processor is further to:

determine that the at least one condition is satisfied for the first signaling message when a requested class of service, associated with the first signaling message, is permitted for the particular network port.

32. (Currently amended) The policy server as set forth in claim 31, where the requested service class of service comprises a constant bit-rate (CBR) service.

33. (Currently amended) The policy server as set forth in claim 31, where the requested service class of service comprises a variable bit-rate (VBR) service.

34. (Previously Presented) The policy server as set forth in claim 33, where the VBR service is a real-time VBR service.

35. (Previously Presented) The policy server as set forth in claim 33, where the VBR service is a non-real-time VBR service.

36. (Currently amended) The policy server as set forth in claim 31, where the requested class of service eclass comprises an unspecified bit-rate (UBR) service.

37. (Currently amended) The policy server as set forth in claim 31, where the requested class of service eclass comprises an available bit-rate (ABR) service.

38. (Currently amended) The policy server as set forth in claim 14, where the processor is further to:

determine that the at least one condition is satisfied for the first signaling message when a quantity of concurrent calls on the ATM network does not exceed a particular maximum number of concurrent calls.

39. (Currently Amended) A non-transitory computer-readable to store instructions, the instructions comprising:

one or more instructions which, when executed by an Asynchronous Transfer Mode (ATM) network node in an ATM network, cause the ATM network node to receive a first signaling message and a second signaling message associated with, respectively, a first call and a

second call from a calling party, the first signaling message and the second signaling message being received from an intercept processor associated with the ATM network;

one or more instructions which, when executed by the ATM network node, cause the ATM network node to identify, based on at least one of the first signaling message or the second signaling message, a policy, for the calling party, from a plurality of policies, [[where]] the policy identifies identifying one or more policy features, of a group of policy features, associated with the calling party, [[where]] at least one of the plurality of policies [[is]] not being associated with the calling party, and [[where]] at least one of the group of the policy features [[is]] not being associated with the policy for the calling party;

one or more instructions which, when executed by the ATM network node, cause the ATM network node to determine whether a policy condition associated with each policy feature, of the one or more policy features, is satisfied with respect to the first signaling message and the second signaling message, [[where]] the determining whether the policy condition associated with each policy feature is satisfied comprising comprises:

one or more instructions to identify, based on the policy, a particular network port, in the ATM network, that the calling party is authorized to use, [[where]] the network port [[is]] being associated with a maximum burst size limit,

one or more instructions to identify an available forward bandwidth on a virtual path from an ingress switch, associated with the calling party, to an egress switch, associated with a called party, where the virtual path includes the particular network port, the available forward bandwidth being based on modifying an actual forward bandwidth, for the virtual path, by a forward overbooking factor associated with the virtual path,

one or more instructions to identify an available reverse bandwidth from the egress switch to the ingress switch along the virtual path, the available reverse bandwidth being based on modifying an actual reverse bandwidth, for the virtual path, by a reverse overbooking factor, associated with the virtual path, that differs from the forward overbooking factor,

one or more instructions to calculate a first requested bandwidth associated with the first signaling message, [[where]] the first requested bandwidth includes including a first forward requested bandwidth from the ingress switch to the egress switch along the virtual path and a first reverse requested bandwidth from the egress switch to the ingress switch along the virtual path,

one or more instructions to calculate a first burst size associated with the first signaling message and a second burst size associated with the second signaling message,

one or more instructions to determine that the policy is satisfied for the first signaling message in response to-based on determining that:

the available forward bandwidth exceeds the first forward requested bandwidth,

the available reverse bandwidth exceeds the first reverse requested bandwidth, and

the first burst size does not exceed the maximum burst size limit,

one or more instructions to calculate a second requested bandwidth associated with the second signaling message, [[where]] the second requested bandwidth includes including a second forward requested bandwidth from the ingress switch to the egress

switch along the virtual path and a second reverse requested bandwidth from the egress switch to the ingress switch along the virtual path,

one or more instructions to determine that the policy is not satisfied for the second signaling message ~~in response to~~ based on determining an occurrence of at least one of:

a total forward requested bandwidth, including the first forward requested bandwidth and the second forward requested bandwidth, exceeds the available forward bandwidth,

a total reverse requested bandwidth, including the first reverse requested bandwidth and the second reverse requested bandwidth, exceeds the available reverse bandwidth, or

a total burst size, including the first burst size and the second burst size, exceeds the maximum burst size limit₂[[,]] and

one or more instructions which, when executed by the ATM network node, cause the ATM network node to cause, responsive determining that the policy for the calling party is satisfied with respect to the first signaling message, a communication, related to the first signaling message, to be established between the calling party and the called party along the virtual path.

40-41. (Canceled)

42. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 39, where at least one of the first signaling message or the second signaling message comprises a Connect message.

43. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 39, where at least one of the first signaling message or the second signaling message comprises an Add Party message.

44. (Currently amended) The non-transitory computer-readable medium as set forth in claim 39, where at least one of the first signaling message or the second signaling message comprises a Release message.

45. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 39, where at least one of the first signaling message or the second signaling message comprises a Setup message.

46. (Currently amended) The non-transitory computer-readable medium as set forth in claim 39, where the one or more instructions to determine that the policy is satisfied for the first signaling message [[is]] further include:

one or more instructions to determine that the policy is satisfied for the first signaling message when an address, associated with the calling party, is within a range of authorized addresses associated with the policy.

47. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 45, where the particular network port is a Customer Logical Port.

48. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 45, where the particular network port is a full physical port.

49. (Currently amended) The non-transitory computer-readable medium as set forth in claim 39, where the particular network port is associated with a maximum call attempt rate limit associated with a number of Setup messages received from the calling party over a predetermined period of time, and

where the one or more instructions to determine that the policy is satisfied for the first signaling message further include:

one or more instructions to determine that establishing the communication associated with the first signaling message does not result in exceeding a [[the]] maximum call frequency rate for the particular network port.

50. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 39, where the one or more instructions to determine that the policy is satisfied for the first signaling message is further responsive to determining that an address, associated with the called party, is within a list of address ranges to which the calling party is authorized to call.

51-54. (Canceled)

55. (Currently Amended) The non-transitory computer-readable medium as set forth in claim 39, where the [[the]] maximum burst size limit comprises a quantity of packets per

second allowed to be transmitted to the ATM network node with respect to at least one of the first call or the second call.

56. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 39, where the first burst size comprises a quantity of packets per second allowed to be received by the calling party from the ATM network node during the communication.

57. (Canceled)

58. (Currently amended) The non-transitory computer-readable medium as set forth in claim 39, where the one or more instructions to determine that the policy is satisfied for the first signaling message further comprise:

one or more instructions to determine whether a requested class of service, associated with the first signaling message, is permitted for the particular network port; and

one or more instructions to determine that the policy is satisfied for the first signaling message further ~~in response to~~based on determining that the requested class of service is permitted for the particular network port.

59. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 58, where the requested class of service comprises a constant bit-rate (CBR) service.

60. (Currently amended) The non-transitory computer-readable medium as set forth in claim 58, where the requested class of service ~~e~~class comprises a variable bit-rate (VBR) service.

61. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 60, where the VBR service is a real-time VBR service.

62. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 60, where the VBR service is a non-real-time VBR service.

63. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 58, where the requested class of service comprises an unspecified bit-rate (UBR) service.

64. (Previously Presented) The non-transitory computer-readable medium as set forth in claim 58, where the requested class of service comprises an available bit-rate (ABR) service.

65. (Currently amended) The non-transitory computer-readable medium as set forth in claim 39, where the one or more instructions to determine that the policy is satisfied for the first signaling message further comprise:

one or more instructions to determine whether a quantity of concurrent communications, if a communication, associated in the first signaling message, is established between the calling

party and the called party via the virtual path, exceeds a maximum number of concurrent communications, and

one or more instructions to determine that the policy is satisfied for the first signaling message further ~~in response to-based on~~ determining that establishing the communication associated with the first signaling message does not result in the quantity of concurrent communications that exceed the maximum number of concurrent communications.

66-81. (Canceled)